The CIRM Human Pluripotent Stem Cell Biorepository – A Resource for Safe Storage and Distribution of High Quality iPSCs

Grant Award Details

The CIRM Human Pluripotent Stem Cell Biorepository – A Resource for Safe Storage and Distribution of High Quality iPSCs

Grant Type: hPSC Repository

Grant Number: IR1-06600

Project Objective: Create hPSC bio-repository for world wide distribution of hiPSC lines generated under RFA 12-03, and for hiPSC and hESC provided by California investigators

Investigator:

Name:	Deborah Requesens
Institution:	Coriell Institute for Medical Research
Type:	PI

Disease Focus: Developmental Disorders, Heart Disease, Infectious Disease, Alzheimer's Disease, Neurological Disorders, Autism, Respiratory Disorders, Vision Loss, Liver Disease, Epilepsy

Human Stem Cell Use: iPS Cell

Cell Line Generation: iPS Cell

Award Value: $9,942,175

Status: Active

Progress Reports

Reporting Period: Year 1

View Report

Reporting Period: Year 2

View Report

Reporting Period: Year 3

View Report

Reporting Period: Year 4

View Report

Grant Application Details

Application Title: The CIRM Human Pluripotent Stem Cell Biorepository – A Resource for Safe Storage and Distribution of High Quality iPSCs

Public Abstract: Critical to the long term success of the CIRM iPSC Initiative of generating and ensuring the availability of high quality disease-specific human IPSC lines is the establishment and successful operation of a biorepository with proven methods for quality control, safe storage and capabilities for worldwide distribution of high quality, highly-characterized iPSCs. Specifically the biorepository will be responsible for receipt, expansion, quality characterization, safe storage and distribution of human pluripotent stem cells generated by the CIRM stem cell initiative. This biobanking resource will ensure the availability of the highest quality hiPSC resources for researchers to use in disease modeling, target discovery and drug discovery and development for prevalent, genetically complex diseases.

Statement of Benefit to California: The generation of induced pluripotent stem cells (iPSCs) from patients and subsequently, the ability to differentiate these iPSCs into disease-relevant cell types holds great promise in facilitating the “disease-in-a-dish” approach for studying our understanding of the pathological mechanisms of human disease. iPSCs have already proven to be a useful model for several monogenic diseases such as Parkinson’s, Fragile X Syndrome, Schizophrenia, Spinal Muscular Atrophy, and inherited metabolic diseases such as →1-antitrypsin deficiency, familial hypercholesterolemia, and glycogen storage disease. In addition, the differentiated cells obtained from iPSCs represent a renewable, disease-relevant cell model for high-throughput drug screening and toxicology/safety assessment which will ultimately lead to the successful development of new therapeutic agents. iPSCs also hold great hope for advancing the use of live cells as therapies for correcting the physiological manifestations caused by disease or injury.